



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Notice to Reader.—When you finish reading this magazine, place a 1 cent stamp on this notice, mail the magazine, and it will be placed in the hands of our soldiers or sailors
No wrapping—No Address.

Vol. 8, No. 6

JUNE, 1919

THE SCIENTIFIC MONTHLY

CONTENTS

THE PLACE OF MODERN LANGUAGES IN RESEARCH, PARTICULARLY IN GEOLOGICAL RESEARCH. THE LATE PROFESSOR JOSEPH BARRELL	481
THE BIOCLIMATIC LAW AS APPLIED TO ENTOMOLOGICAL RESEARCH AND FARM PRACTICE. DR. ANDREW D. HOPKINS	496
AN ENTOMOLOGICAL CROSS-SECTION OF THE UNITED STATES. PROFESSOR J. CHESTER BRADLEY	514
DÉODAT DOLOMIEU. DR. GEORGE F. KUNZ	527
WINDOW GLASS AS A FACTOR IN HUMAN EVOLUTION. R. E. DANFORTH . .	537
THE EFFECTS OF THE WAR ON THE AMERICAN PEOPLE. DR. ALEŠ HRDLÍČKA	542
INDUSTRY AND FOOD PRICES AFTER THE WAR. DR. J. PEASE NORTON . .	546
NERVOUS AND OTHER FORMS OF PROTOPLASMIC TRANSMISSION. PROFESSOR RALPH S. LILLIE	552
THE PROGRESS OF SCIENCE: Scientific Meetings and the National Academy of Sciences; The Structure of the Atom; The Origin of Civilization; Scientific Items	568
INDEX TO VOLUME VIII	575

THE SCIENCE PRESS

LANCASTER, PA.

GARRISON, N. Y.

NEW YORK: SUB-STATION 84

SINGLE NUMBER, 30 CENTS

YEARLY SUBSCRIPTION, \$3.00

COPYRIGHT 1917 BY THE SCIENCE PRESS

A Remarkable Textbook

Barber's First Course in General Science

By FREDERICK D. BARBER, Professor of Physics in the Illinois State Normal University, MERTON L. FULLER, Lecturer on Meteorology in the Bradley Polytechnic Institute, JOHN L. PRICER, Professor of Biology in the Illinois State Normal University, and HOWARD W. ADAMS, Professor of Chemistry in the same. vii+588 pp. of text. 12mo. \$1.25.

A recent notable endorsement of this book occurred in Minneapolis. A Committee on General Science, representing each High School in the city, was asked to outline a course in Science for first year High School. After making the outline they considered the textbook situation. In this regard, the Committee reports as follows:

"We feel that, in Science, a book for first year High School use should be simple in language, should begin without presupposing too much knowledge on the part of the student, should have an abundance of good pictures and plenty of material to choose from.

Barber's *First Course in General Science* seems to us to best meet these requirements and in addition it suggests materials for home experiments requiring no unusual apparatus, and requires no scientific measurements during the course. We recommend its adoption."

Other Interesting Opinions on the Book Follow:

SCHOOL SCIENCE AND MATHEMATICS:—It is one of the very best books on general science that have ever been published. The biological as well as the physical side of the subject is treated with great fairness. There is more material in the text than can be well used in one year's work on the subject. This is, however, a good fault, as it gives the instructor a wide range of subjects. The book is written in a style which will at once command not only the attention of the teacher, but that of the pupil as well. It is interesting from cover to cover. Many new and ingenious features are presented. The drawings and halftones have been selected for the purpose of illustrating points in the text, as well as for the purpose of attracting the pupil and holding his attention. There are 375 of these illustrations. There is no end to the good things which might be said concerning this volume, and the advice of the writer to any school board about to adopt a text in general science is to become thoroughly familiar with this book before making a final decision.

WALTER BARR, *Keokuk, Iowa*:—Today when I showed Barber's Science to the manager and department heads of the Mississippi River Power Co., including probably the best engineers of America possible to assemble accidentally as a group, the exclamation around the table was: "If we only could have had a book like this when we were in school." Something similar in my own mind caused me to determine to give the book to my own son altho he is in only the eighth grade.

G. M. WILSON, *Iowa State College*:—I have not been particularly favorable to the general science idea, but I am satisfied now that this was due to the kind of texts which came to my attention and the way it happened to be handled in places where I had knowledge of its teaching. I am satisfied that Professor Barber, in this volume, has the work started on the right idea. It is meant to be useful, practical material closely connected with explanation of every day affairs. It seems to me an unusual contribution along this line. It will mean, of course, that others will follow, and that we may hope to have general science work put on such a practical basis that it will win a permanent place in the schools.

Henry Holt and Company

NEW YORK

BOSTON

CHICAGO

The Society of Nations

ITS PAST, PRESENT, and POSSIBLE FUTURE

By T. J. LAWRENCE, LL.D., J.P.

Crown 8vo. (8¼ x 5½), pp. xi+194. Net \$1.50

A full account of the relations subsisting between independent states enabling the general reader to form reasonable conviction with regard to the possibilities of improvement. The author indicates that the fundamental factor in the whole complicated problem now before the nations is moral and spiritual. He was formerly professor of international law at the University of Chicago and has written a number of books on international law, which are widely used in colleges.

CONTENTS—The Origin of International Society; The Growth of International Society; International Society in July, 1914; The Partial Overthrow of International Law; Conditions of Reconstruction; Rebuilding of International Society.

A Republic of Nations

A Study of the Organization of a Federal League of Nations based on the Constitution of the United States. By RALEIGH C. MINOR. 8vo (8¼ x 5¼), pp. 349. Net \$2.50

"A book that must be read by every serious student of the most important issue now before the world."

—*N. Y. Eve. Post*

"A convincing and practical presentation of a plan which will be of the utmost interest to all thoughtful readers."—*The Independent*.

"The introduction alone is worth the price of the book."—*Chicago Daily News*.

James Madison's Notes of Debates

In the Federal Convention of 1787 and Their Relation to a More Perfect Society of Nations. Edited by JAMES BROWN SCOTT. 8vo (9 x 6), 167 pages. Net \$2.00

Dr. Scott, the eminent international lawyer, argues convincingly that the United States has furnished to the world a League of Nations. The Federal Convention faced as colossal a task as that which confronts the Peace Conference, and solved practically the same problems.

"Of the utmost value at the present juncture."

—*The Sun*.

"Will afford material for argument as well as food for thought to both those who favor and those who oppose the League of Nations."—*N. Y. Tribune*.

The Congress of Vienna, 1814-1815

By C. K. WEBSTER. 8vo (8¼ x 5¼), pp. 174, with a map, chronological table and eight appendices, paper. \$2.00

The first standard history of the Congress of Vienna. Of particular value at this time as a guide in the settlement of some of the problems now before the peoples of the world.

The Turks of Central Asia

In History and at the Present Day: an Ethnological Inquiry into the Pan-Turanian Problem, and Bibliographical Material relating to the Early Turks and the present Turks of Central Asia, by M. A. CZAPLICKA. 8vo (9¼ x 5¼), pp. 242, with a map, appendixes, and extensive bibliographical material. \$6.75

The European Commonwealth

Problems Historical and Diplomatic, by J. A. R. MARIOTT, author of *The Eastern Question*. 8vo (9¼ x 5¼), pp. xii+370. Net \$7.50

A new book dealing with the rise of modern diplomacy, the Hohenzollern traditions, the problems of Poland, the Near East and the Adriatic, and the Holy Alliance and the Concert of Europe.

Labour and Industry in Australia

From the first settlement in 1788 to the establishment of the Commonwealth in 1901, by T. A. COGHLAN. Four volumes. 8vo (8¼ x 5¼). Vol. I, pp. viii+588; Vol. II, pp. vi+589-1185; Vol. III, pp. 1186-1790; Vol. IV, pp. 1791-2450. \$33.00

A history of the Labour movements in Australia from the first beginning of the colony to the foundation of the Commonwealth in 1901. It is divided chronologically into seven books, each book dealing exhaustively with questions of immigration, land legislation, prices and political action of its period. The author was for years Agent General for New South Wales.

The Emperor Lucius Septimius Severus

By MAURICE PLATNAUER. 8vo (8 x 5¼), pp. viii+222. \$5.40

The reign of Septimius is an important, if not a crucial one in the history of the later Roman Empire. So far no account has appeared in English of one whom Bacon, with some show of reason, has called "the ablest Emperour almost of all the liste."—*Preface*.

Poems of Gerard Manley Hopkins

Now first published. Edited with notes by ROBERT BRIDGES, Poet Laureate. Crown 8vo (7¼ x 5), with six illustrations. Paper board, cloth back. Net \$5.65

The Poet Laureate's Notes are critical and explanatory. He explains the poet's peculiar prosody and under the two heads of oddity and obscurity censures his faults of style, but observes that where he is simple and straightforward in his rhyme he is a master of it.

The Pronunciation of Standard English in America

By GEORGE PHILIP KRAPP, Prof. of English, Columbia Univ. Crown 8vo (7¼ x 5), pp. xv+235. \$1.50

The purpose of this book is to provide a rational method of examining pronunciation, and the principal aspects of speech. The phonetic alphabet of the International Phonetic Association is used as a basis throughout.

Characters

From the Histories and Memoirs of the Seventeenth Century, with an essay on The Character, and historical notes by DAVID NICHOL SMITH. Crown 8vo (7½ x 5), pp. lii+332. \$2.70

There are seventy-six characters taken from Clarendon, Burnet, Thomas Fuller, Aubrey, Sir Philip Warwick, and many others.

At all Booksellers or from the Publishers. Postage Extra



Oxford University Press American Branch

35 West 32d Street, New York



An Important Contribution to the Literature of Science

A Short History of Science

BY

W. T. SEDGWICK,

Professor of Biology

H. W. TYLER,

Professor of Mathematics

at the Massachusetts Institute of Technology

The history of science is as engrossing as the history of Greece and Rome and gives as sure an indication of the growth of civilization as does the history of philosophy, art, literature, or music.

The literature of science has always been more or less technical both in the subject matter and the form of its presentation, and Professors Sedgwick and Tyler have rendered a great service to the lay reader as well as to the student in writing a history of the development of science from its remotest period, through the romance of Mediaeval astrology and alchemy to the tremendous achievements of the last centuries.

"A Short History of Science" is one of the first books of its kind in English and is the result of the authors' many years of joint teaching of the subject. It is a book which will prove of the greatest value to Universities, Colleges, Scientific and Technical schools, and is especially adapted to general reading and reference.

With Appendices and Illustrations. Cloth, 8vo, \$2.50

THE MACMILLAN COMPANY

PUBLISHERS

NEW YORK

The Journal of General Physiology

EDITED BY

JACQUES LOEB, New York

W. J. V. OSTERHOUT, Cambridge, Mass.

The Journal of General Physiology is devoted to the explanation of life phenomena on the basis of the physical and chemical constitution of living matter.

The Journal of General Physiology is issued bimonthly, one volume of about 600 pages appearing in a year. Contributions should be addressed to the editors of **The Journal of General Physiology**, The Rockefeller Institute for Medical Research, Avenue A and 66th Street, New York, or 60 Buckingham Street, Cambridge, Massachusetts. The papers should preferably not exceed twenty printed pages, not counting the space occupied by illustrations. Authors receive one hundred reprints of their papers free of charge; additional copies may be obtained at cost.

Subscription price per year (one volume), \$5.00

CONTENTS OF VOLUME I, No. 4, MARCH 20, 1919

- HENDERSON, L. J., FENN, W. O., and COHN, EDWIN J. Influence of electrolytes upon the viscosity of dough.
- IRWIN, MARIAN. Comparative studies on respiration. VI. Increased production of carbon dioxide accompanied by decrease of acidity.
- OSTERHOUT, W. J. V. Decrease of permeability and antagonistic effects caused by bile salts.
- OSTERHOUT, W. J. V. A comparison of permeability in plant and animal cells.
- HARVEY, E. NEWTON. The relation between the oxygen concentration and rate of reduction of methylene blue by milk.
- ITANO, ARAO, and NEILL, JAMES. Influence of temperature and hydrogen ion concentration upon the spore cycle of *Bacillus subtilis*.
- HACKH, INGO W. D. Bioelements; the chemical elements of living matter.
- PATTEN, BRADLEY M. Photoreactions of partially blinded whiptail scorpions.
- HENDERSON, L. J., COHN, EDWIN J., CATHCART, P. H., WACHMAN, J. D., and FENN, W. O. A study of the action of acid and alkali on gluten.
- UHLENHUTH, EDUARD. Relation between thyroid gland, metamorphosis, and growth.
- LOEB, JACQUES. Amphoteric colloids. IV. The influence of the valency of cations upon the physical properties of gelatin.

PUBLISHED BY

The Rockefeller Institute for Medical Research

Avenue A and 66th Street

New York

Naturalists' Supplies

We carry stock for prompt delivery

- I. Collecting Utensils.
- II. Breeding Apparatus and Cages for Living Animals.
- III. Preparing and Preserving Utensils.
- IV. Cabinets, Insect Cases and Lining Material.
- V. Magnifiers, Microscopes and Accessories.
- VI. Botanists' Supplies.
- VII. Explorers' and Collectors' Camp Outfits.
- VIII. Miscellaneous Naturalists' Supplies.
- IX. Oologists' Supplies.
- X. Aquaria.
- XI. Books and Publications.
- XII. Chemicals.

K-S Museum Cabinets of Glass and Metal

New Illustrated Biological Catalog will be sent free of charge upon application

THE KNY-SCHEERER CORPORATION

Department of Natural Science
G. Lagai, Ph.D.

404-410 West 27th Street
New York City, N. Y.

Georgetown University

**School of Medicine and
Dental Department**

The Sixty-fourth Session will begin September 28th, 1914, and continue eight and one-half months. Six-Year Collegiate and Medical Course leading to degrees B.S. and M.D. Practical laboratory work under special instructors, in Anatomy, Physiology, Chemistry, Histology, Pathology and Bacteriology. Ample facilities for clinical experience and practical work in hospitals of city and in the University Hospital, containing in all over 3000 beds. For particulars address

GEORGE M. KOBER, M.D.

Dean School of Medicine, 1819 Q Street

SHIRLEY W. BOWLES, D.D.S.

Dean Dental Department, 1616 Eye Street, N. W.
Washington, D. C.

Learn to be a Watchmaker

Bradley Polytechnic Institute

Horological Department PEORIA, ILL.

Formerly Parsons Horological Inst.

Largest and Best Watch School in America

We teach Watch Work, Jewelry, Engraving, Clock Work, Optics. Tuition reasonable. Board and rooms near school at moderate rates. Send for Catalog of Information.



This entire building used exclusively as a watch school.

Marine Biological Laboratory

Woods Hole, Mass.

INVESTIGATION

Entire Year

Facilities for research in Zoology, Embryology, Physiology and Botany. Seventy-six private laboratories, \$100 each for not over three months. Thirty tables are available for beginners in research who desire to work under the direction of members of the staff. The fee for such a table is \$50.00.

INSTRUCTION

**July 2 to August 12,
1919**

Courses of laboratory instruction with lectures are offered in Invertebrate Zoology, Protozoology, Embryology, Physiology and Morphology and Taxonomy of the Algae. Each course requires the full time of the student. Fee, \$50. A lecture course on the Philosophical Aspects of Biology and Allied Sciences is also offered.

SUPPLY DEPARTMENT

Open the Entire Year

Animals and plants, preserved, living, and in embryonic stages. Preserved material of all types of animals and of Algae, Fungi, Liverworts and Mosses furnished for classwork, or for the museum. Living material furnished in season as ordered. Microscopic slides in Zoology, Botany, Histology, Bacteriology. Price lists of Zoological and Botanical material and Microscopic Slides sent on application. State which is desired. For price lists and all information regarding material, address

GEO. M. GRAY Curator, Woods Hole, Mass.

The annual announcement will be sent on application to The Director, Marine Biological Laboratory, Woods Hole, Mass.